

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 23, 2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 9 and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,254,092 to Polyak in view of US 4,854,482 to Bergner.

Polyak shows a pumping system as seen in Figs. 10-13, having a fluid source 15 for selective pressurization, a hydraulic mechanism 14 and 23, an ergonomic pistol-grip handle 20, a trigger 21 pivotally mounted to an upper end of the housing, valves 2, see Figs. 7-9, to control the flow of the fluid, a connector 17, an actuator 10 located distal to the trigger for selecting pressure relieve and flexible conduits 37 and 38. The device of Polyak is operable by a single hand and is used to deliver the working fluid to a dispenser. Polyak is silent about bleeding air and fluid out external to the fluid source. Bergner shows a material dispenser as seen in Fig. 1 having valves 10 to vent air and working fluid out external to the fluid source. It would have

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been obvious to a person with ordinary skill in the art at the time of the invention to modify the device of Polyak by venting air and working fluid external to the fluid source to eliminate any air from the system as taught by Bergner.

4. Claims 16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,254,092 to Polyak as modify by US 4,854,482 to Bergner as applied to claim 1 above, and further in view of US 5,015,233 to McGough et al.

The Polyak-Bergner combination show all claimed features as discussed above but are silent about a syringe with a plunger connected to the pressure pump and the working pressure range of up to 5000 PSI. McGough show a syringe 12 having a plunger 10 connected to the pressure pump as seen in Fig. 1. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to use a syringe with a plunger connected to the pressure pump of the Polyak-Bergner combination to dispense from the syringe with ease and control as taught by McGough.

In reference to claims 16 and 20, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the device of the Polyak-Bergner combination to work in any suitable pressure range, including 5000 PSI, since the pressure required to dispensed a product is a function of factors such as the required dispensed flow rate, type of nozzle assembly and viscosity of the material being dispensed.

5. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,254,092 to Polyak as modify by US 4,854,482 to Bergner as applied to claim 1 above, and further in view of US 4,250,887 to Dardik et al.

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The Polyak-Bergner combination show all claimed features as discussed above but are silent about the length of the flexible tubing being long enough to permit a user to be outside of a radiation field of a patient being imaged. Dardik show a remote manual injecting apparatus as seen in Fig. 1, with flexible tubing 33 long enough to permit a user to be outside of a radiation field 10 of a patient being imaged 12. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to provide the device of the Polyak-Bergner combination with a long enough flexible tube to distance the operator from the radiation source and prevent exposing an operator to harmful radiation as taught by Dardik.

6. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,254,092 to Polyak as modify by US 4,854,482 to Bergner as applied to claim 21 above, and further in view of US 4,776,618 to Barree.

The Polyak-Bergner combination show all claimed features as discussed except for a hollow housing for receiving the conduit with a ferrule and a seal surrounding and sealing the conduit against a set screw. Barree shows a sealing structure having a hollow housing 70, a ferrule 40, a seal 60 and a set screw 10 surrounding and sealing the conduit 20. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to use the sealing structure of Barree in the device of the Polyak-Bergner combination to provide the combination device with a coupling that can withstand very high pressures as taught by Barree.

7. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,254,092 to Polyak as modify by US 4,854,482 to Bergner as applied to claim 21 above, and further in view of US 4,823,588 to Bussereau et al.

The Polyak-Bergner combination show all claimed features as discussed except for a pressure release mechanism pivotally rotatable about a pin and a relief valve between the fluid source and the pressure mechanism for releasing the fluid back to the source when pressure exceeds a threshold. Bussereau shows a pneumatic hand actuated tool as seen in Fig. 2. having a pressure release valve 21 actuated by a lever 20 pivotal on a pin and a return valve on conduit 15. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to use a pressure release and return valve in the device of the Polyak-Bergner combination to improve manual control of the pneumatic pump as taught by Bussereau.

Response to Arguments

8. Applicant's arguments filed March 31, 2009 have been fully considered but they are not persuasive. In response to applicant's argument that device of Polyak lacks the release mechanism at an opposite end of the housing, the pressure release valves in the device of Polyak is operable by a user's hand that is holding the handle 20 and is located at a location opposite to the actuation trigger 40. In response to applicant's argument that the device of the Polyak-Bergner combination lacks a container of viscous material connected to the conduit, the device of Bergner shows a container of viscous material formed in the handle 1a.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin A. Cartagena whose telephone number is (571) 272-4924. The examiner can normally be reached on M-F (8:30AM to 7:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. A. C./
Examiner, Art Unit 3754

/Kevin P. Shaver/
Supervisory Patent Examiner, Art Unit 3754